

IN THE CLAIMS:

Please cancel claims 1-3 and amend claims 6, 10-12 and 15-17 as follows:

Claims 1-3 (Canceled).

Claim 5 (Previously Presented): A stereomicroscope comprising:

an illumination unit for illuminating a specimen with light;

a specimen setting board; and

a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,

wherein one of a predetermined a low-magnification objective lens and a higher-magnification objective lens than said low-magnification objective lens is selected and fitted as said objective lens to said fitting member,

said illumination unit includes a light source, a shield element for cutting off partially light beam emitted from said light source, first and second condenser lenses for converging the light beam passing said shield element on the specimen, and a mechanism for selecting one of said first and second condenser lenses and disposing said selected condenser lens on the optical axis,

said first condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

said second condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said high-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

wherein said shield element is disposed on a deflecting element for bending the optical axis, and

said shield element has a cover member for covering a part of a deflecting surface of said deflecting element.

Claim 6 (Currently Amended): A stereomicroscope comprising:
an illumination unit for illuminating a specimen with light;
a specimen setting board; and
a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,

wherein one of a predetermined a low-magnification objective lens and a higher-magnification objective lens than said low-magnification objective lens is selected and fitted as said objective lens to said fitting member,

said illumination unit includes a light source, a shield element for cutting off partially light beam emitted from said light source, first and second condenser lenses for converging the light beam passing said shield element on the specimen, and a mechanism for selecting one of said first and second condenser lenses and disposing said selected condenser lens on the optical axis,

said first condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

said second condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said high-magnification objective lens fitted to said fitting

member in a position of said shield element or in the vicinity of said shield element,

wherein said shield element is disposed on a deflecting element for bending the optical axis,

wherein said shield element has a cover member for covering a part of a deflecting surface of said deflecting element ~~A stereomicroscope according to claim 5, and~~

wherein said shield element includes a mechanism for increasing and decreasing a covered area of the deflecting surface by feeding out and drawing in said cover member above the deflecting surface in order to adjust a quantity of the light beam to be cut off.

Claim 10 (Currently Amended): A stereomicroscope comprising:

an illumination unit for illuminating a specimen with light;

a specimen setting board; and

a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,

wherein one of a predetermined a low-magnification objective lens and a higher-magnification objective lens than said low-magnification objective lens is selected and fitted as said objective lens to said fitting member,

said illumination unit includes a light source, a shield element for cutting off partially light beam emitted from said light source, first and second condenser lenses for converging the light beam passing said shield element on the specimen, and a mechanism for selecting one of said first and second condenser lenses and disposing said selected condenser lens on the optical axis,

said first condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

said second condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said high-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

wherein said shield element is disposed on a deflecting element for bending the optical axis,

wherein said shield element has a cover member for covering a part of a deflecting surface of said deflecting element ~~A stereomicroscope according to claim 5, and~~

wherein a reflectance of a front end portion of said cover member is larger than reflectances of other portions thereof.

Claim 11 (Currently Amended): A stereomicroscope comprising:

an illumination unit for illuminating a specimen with light;

a specimen setting board; and

a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,

wherein one of a predetermined a low-magnification objective lens and a higher-magnification objective lens than said low-magnification objective lens is selected and fitted as said objective lens to said fitting member,

said illumination unit includes a light source, a shield element for cutting off partially light beam emitted from said light source, first and second condenser lenses for converging the

light beam passing said shield element on the specimen, and a mechanism for selecting one of said first and second condenser lenses and disposing said selected condenser lens on the optical axis,

said first condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

said second condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said high-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

wherein the position conjugate to the entrance pupil of said low-magnification objective lens formed by said first condenser lens and the position conjugate to the entrance pupil of said higher-magnification objective lens formed by said second condenser lens are substantially same,

wherein the shield element is disposed at a position distant from the first condenser lens and the second condenser lens, and at a side of the light source ~~A stereomicroscope according to claim 1,~~ and

wherein the following conditions are satisfied:

$$0.5 < (f_H/d_H) / (f_L/d_L) < 6.0$$

$$-0.1 < (1/|f_L|) - (1/|d_L|) < 0.1$$

$$-0.1 < (1/|f_H|) - (1/|d_H|) < 0.1,$$

where f_H is a synthetic focal length of the condenser lens for the high-magnification objective lens,

f_L is a synthetic focal length of the condenser lens for the low-magnification objective lens,

dH is a distance along the optical axis from the center of the lens surface of the condenser lens for the high-magnification objective lens to a deflecting surface of a deflecting element disposed in the position of said shield element, and

dL is a distance along the optical axis from the center of the lens surface of the condenser lens for the low-magnification objective lens to the deflecting surface of the deflecting element disposed in the position of said shield element.

Claim 12 (Currently Amended): A stereomicroscope comprising:
an illumination unit for illuminating a specimen with light;
a specimen setting board; and
a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,
wherein one of a predetermined a low-magnification objective lens and a higher-
magnification objective lens than said low-magnification objective lens is selected and fitted as
said objective lens to said fitting member,
said illumination unit includes a light source, a shield element for cutting off partially
light beam emitted from said light source, a first condenser lens for converging the light beam
passing said shield element on the specimen, and a mechanism for moving said first condenser
lens on and off the optical axis,
said shield element is disposed in a position of an entrance pupil or in the vicinity of this
entrance pupil of said high-magnification objective lens as said objective lens fitted to said fitting
member,

said first condenser lens exhibits an optical characteristic of setting a position conjugate to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a position of said shield element or in the vicinity of said shield element,

the shield element is disposed at a position distant from the first condenser lens, and at a side of the light source ~~A stereomicroscope according to claim 2, and~~

wherein the following conditions are satisfied:

$$0.5 < (fL / dL) < 4.0$$

$$0.5 < (dS / dL) < 4.0,$$

where fL is a synthetic focal length of the condenser lens for the low-magnification objective lens,

dL is a distance along the optical axis from the center of the lens surface of the condenser lens for the low-magnification objective lens to a deflecting surface of a deflecting element disposed in the position of said shield element, and

dS is a distance along the optical axis from the specimen surface on the specimen setting board to the shield element.

Claim 13 (Previously Presented): A stereomicroscope according to claim 10, wherein the reflectance of said shield element decreases continuously from a tip end thereof toward an inner portion thereof.

Claim 14 (Previously Presented): A stereomicroscope according to claim 10, wherein the reflectance of said shield element decreases stepwisely from a tip end thereof toward an inner portion thereof.

Claim 15 (Currently Amended): A stereomicroscope comprising:
an illumination unit for illuminating a specimen with light;
a specimen setting board; and
a fitting member for fitting an objective lens, said illumination unit, said specimen setting
board and said fitting member being disposed in sequence on an optical axis,
wherein one of a predetermined a low-magnification objective lens and a higher-
magnification objective lens than said low-magnification objective lens is selected and fitted as
said objective lens to said fitting member,
said illumination unit includes a light source, a shield element for cutting off partially
light beam emitted from said light source, a first condenser lens for converging the light beam
passing said shield element on the specimen, and a mechanism for moving said first condenser
lens on and off the optical axis,
said shield element is disposed in a position of an entrance pupil or in the vicinity of this
entrance pupil of said high-magnification objective lens as said objective lens fitted to said fitting
member,
said first condenser lens exhibits an optical characteristic of setting a position conjugate
to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a
position of said shield element or in the vicinity of said shield element,
the shield element is disposed at a position distant from the first condenser lens, and at a
side of the light source ~~The stereomicroscope of claim 2,~~ and
wherein a deflecting element for bending the optical axis is disposed in the position of
said shield element of said illumination unit, said shield element has a cover member for

covering a part of a deflecting surface of said deflecting element, wherein a reflectance of a front end portion of said cover member is larger than reflectances of other portions thereof.

Claim 16 (Currently Amended): A stereomicroscope comprising:
an illumination unit for illuminating a specimen with light;
a specimen setting board; and
a fitting member for fitting an objective lens, said illumination unit, said specimen setting board and said fitting member being disposed in sequence on an optical axis,
wherein one of a predetermined a low-magnification objective lens and a higher-
magnification objective lens than said low-magnification objective lens is selected and fitted as
said objective lens to said fitting member,
said illumination unit includes a light source, a shield element for cutting off partially
light beam emitted from said light source, first and second condenser lenses for converging the
light beam passing said shield element on the specimen, and a mechanism for selecting one of
said first and second condenser lenses and disposing said selected condenser lens on the optical
axis,
said first condenser lens exhibits an optical characteristic of setting a position conjugate
to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a
position of said shield element or in the vicinity of said shield element,
said second condenser lens exhibits an optical characteristic of setting a position
conjugate to an entrance pupil of said high-magnification objective lens fitted to said fitting
member in a position of said shield element or in the vicinity of said shield element,

wherein said shield element is disposed on a deflecting element for bending the optical axis,

wherein said shield element has a cover member for covering a part of a deflecting surface of said deflecting element ~~A stereomicroscope according to claim 5, and~~

wherein the following conditions are satisfied:

$$0.5 < (fH/dH) / (fL/dL) < 6.0$$

$$-0.1 < (1/|fL|) - (1/|dL|) < 0.1$$

$$-0.1 < (1/|fH|) - (1/|dH|) < 0.1,$$

where fH is a synthetic focal length of the condenser lens for the high-magnification objective lens,

fL is a synthetic focal length of the condenser lens for the low-magnification objective lens,

dH is a distance along the optical axis from the center of the lens surface of the condenser lens for the high-magnification objective lens to the deflecting surface of the deflecting element, and

dL is a distance along the optical axis from the center of the lens surface of the condenser lens for the low-magnification objective lens to the deflecting surface of the deflecting element.

Claim 17 (Currently Amended): A stereomicroscope comprising:
an illumination unit for illuminating a specimen with light;
a specimen setting board; and
a fitting member for fitting an objective lens, said illumination unit, said specimen setting
board and said fitting member being disposed in sequence on an optical axis,
wherein one of a predetermined a low-magnification objective lens and a higher-
magnification objective lens than said low-magnification objective lens is selected and fitted as
said objective lens to said fitting member,
said illumination unit includes a light source, a shield element for cutting off partially
light beam emitted from said light source, first and second condenser lenses for converging the
light beam passing said shield element on the specimen, and a mechanism for selecting one of
said first and second condenser lenses and disposing said selected condenser lens on the optical
axis,
said first condenser lens exhibits an optical characteristic of setting a position conjugate
to an entrance pupil of said low-magnification objective lens fitted to said fitting member in a
position of said shield element or in the vicinity of said shield element,
said second condenser lens exhibits an optical characteristic of setting a position
conjugate to an entrance pupil of said high-magnification objective lens fitted to said fitting
member in a position of said shield element or in the vicinity of said shield element,
wherein said shield element is disposed on a deflecting element for bending the optical
axis,
wherein said shield element has a cover member for covering a part of a deflecting
surface of said deflecting element ~~A stereomicroscope according to claim 5, and~~

wherein the following conditions are satisfied:

$$0.5 < (fL / dL) < 4.0$$

$$0.5 < (dS / dL) < 4.0,$$

where fL is a synthetic focal length of the condenser lens for the low-magnification objective lens,

dL is a distance along the optical axis from the center of the lens surface of the condenser lens for the low-magnification objective lens to the deflecting surface of the deflecting element, and

dS is a distance along the optical axis from the specimen surface on the specimen setting board to the shield element.